



TEJUS
CONSULTANTS

AGGREGATE IMPACT VALUE (IS: 2386 Part - 4)

Project	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatarayanapura Sub Division					
Client	BRUHAT BANGALORE MAHANAGARA PALIKE					
Consultant	M/s Tejus Consultants					
Contractor	Sri. Santhosh Kumar K R					
Proposed Use	DBM		Date of Sampling	13-07-2020		
Sample Location	At plant		Date of Testing	13-07-2020		
Sl. No.	Description		Test No.			Spec Limit (%)
			1	2	3	
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	392.00	386.00	364.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	300.00	296.00	278.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	92.00	90.00	86.00	
4	Aggregate Impact Value (%)	$(Wc/Wa) \times 100$	23.47	23.32	23.63	
5	Average Aggregate impact value	(%)	23.47			Max - 30 %
Remarks : Satisfactory / Not Satisfactory						

Note:

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Authorised Signatory

Asst. Executive Engineer
Project Division
Yelahanka Zone
BEMP, Bangalore - 92

FLAKINESS AND ELONGATION INDICES (IS 2386, PART 1)

Project	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatarayanapura Sub Division				
Client	BRUHAT BANGALORE MAHANAGARA PALIKE				
Consultant	M/s Tejus Consultants				
Contractor	Sri. Santhosh Kumar K R				
Type of Material	DBM		Proposed Use	DBM	
Sample Location	At plant		Date of Sampling	13-07-2020	
			Date of Testing	13-07-2020	
Size of aggregate	Flakiness Index		Elongation Index		
Passing through IS sieve, mm	Retained on IS sieve, mm	Total wt. of aggregate retained on sieves (A) gms.	Wt. of aggregate passing from Flakiness gauge (B) gms	Wt. of aggregate retained on Flakiness gauge (C) gms	Wt. of aggregate retained on Elongation gauge after retained on Flakiness gauge(D)gms
63.0	50.0	0	0	0	0
50.0	40.0	0	0	0	0
40.0	31.5	7642	662	6980	406
31.5	25.0	4582	186	4396	212
25.0	20.0	2270	304	1966	296
20.0	16.0	1256	304	952	284
16.0	12.5	538	132	406	142
12.5	10.0	288	74	214	94
10.0	6.3	120	80	40	86
Total		16696	1742	14954	1520
Results:					
		Flakiness Index(%):	10.43		
		Elongation Index(%):	10.16		
		Combined FI+EL (%)	20.60		

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Project Division
Zone
- 92



GRADATION FOR DBM					
(As per MORT&H 500-10, Grading-2)					
Name of Work	:	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatarayanapura Sub Division			
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE			
Consultant	:	M/s Tejus Consultants			
Contractor	:	Sri. Santhosh Kumar K R			
Date of Testing	:	14-07-2020			
Type of Mix	:	DBM			
Sample I/D	:	DBM-1			
Sample Location:	At plant	Date of Sampling:	13-07-2020		
		Date of testing:	14-07-2020		
Type of material & Purpose:	DBM	Oven Dry Wt.(gms):	1500.0		
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
37.50	0	0	0.00	100.00	100.00
26.50	78	76	5.07	94.93	90-100
19.00	160	238	15.87	84.13	71-95
13.20	280	520	34.67	65.33	56-80
4.750	272	794	52.93	47.07	38-54
2.360	208	1012	67.47	32.53	28-42
0.300	222	1232	82.13	17.87	7-21
0.075	190	1422	94.80	5.20	2-8
Pan	78				
Total	1500.0				
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BITUMEN CONTENT AND GRADATION DETERMINATION OF DENSE BITUMINOUS MACADAM MIX					
TEJUS CONSULTANTS					
Name of Work	:	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatarayanapura Sub Division			
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE			
Consultant	:	M/s Tejus Consultants			
Contractor	:	Sri. B B Umesh (M/s SMLP Asphalts)			
Date of Testing	:	14-07-2020			
Type of Mix	:	DBM			
Sample I/D	:	DBM-1			
DETERMINATION OF BITUMEN CONTENT					
Description		Trail 1	Trail 2		
1. Weight of Mixture before extraction, g		862	854		
2. Weight of Mixture after extraction, g		825	817		
3. Weight of Bitumen		37	37		
4. Weight of filter paper before extraction, g		2.00	2.00		
5. Weight of filter paper after extraction, g		4.00	4.00		
6. Weight of fines, g		2.00	2.00		
7. Weight of Bitumen & fines		39.00	39.00		
8. Bitumen content in %		4.52	4.57		
9. Average Bitumen content in %		4.55			
10. Minimum Bitumen content in %		4.50			
GRADATION FOR DBM AFTER EXTRACTION					
(As per MORT&H 500-10, Grading-2)					
Sample Location:	At site	Date of Sampling:	14-07-2020		
		Date of testing:	14-07-2020		
Type of material & Purpose:	DBM	Oven Dry Wt.(gms)	825		
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
37.50	0.0	0.0	0.00	100.00	100.00
26.50	62.0	62.0	7.52	92.48	90-100
19.00	128.0	190.0	23.03	76.97	71-95
13.20	122.0	312.0	37.82	62.18	56-80
4.750	142.0	454.0	55.03	44.97	38-54
2.360	114.0	568.0	68.85	31.15	28-42
0.300	148.0	716.0	86.79	13.21	7-21
0.075	64.0	780.0	94.55	5.45	2-8
Pan	45.0				
Total	825.0				
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DETERMINATION OF RATE OF SPREAD TACK COAT

Name of Work :	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatarayanapura Sub Division
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	Sri. Santhosh Kumar K R
Date of Testing :	14-07-2020
Type of Mix :	Tack coat
Sample I/D :	1

Determination	Unit	Test No		
		1	2	3
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.786	0.752	0.764
Final weight of plate after application of tack Coat (c)	Kg	0.809	0.775	0.787
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.251	0.256	0.251
Average	Kg/sq.m	0.253		
Specified Limit	Kg/sq.m	0.250 Kg/sq.m		

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Consultant's Representative


Asst. Executive Engineer
Zone
Bangalore - 92



AGGREGATE IMPACT VALUE
(IS: 2386 Part - 4)

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Project	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatarayanapura Sub Division		
Client	BRUHAT BANGALORE MAHANAGARA PALIKE		
Consultant	M/s Tejus Consultants		
Contractor	Sri. Santhosh Kumar K R		
Proposed Use	BC	Date of Sampling	15-07-2020
Sample Location	At plant	Date of Testing	15-07-2020

Sl. No.	Description		Test No.			Spec Limit (%)
			1	2	3	
1	Wt. of stone pieces (dry) passing IS Sieve 12.5mm but retained in IS sieve 10mm (gm)	(Wa)	386.00	374.00	358.00	
2	Wt. of the fraction retained in IS sieve 2.36mm after the impact test (gm)	(Wb)	296.00	286.00	274.00	
3	Wt. of the fraction passed in IS sieve 2.36mm after the impact test (gm)	(Wc)	90.00	88.00	84.00	
4	Aggregate Impact Value (%)	(Wc/Wa)*100	23.32	23.53	23.46	
5	Average Aggregate impact value	(%)	23.44			Max - 30 %

Remarks :

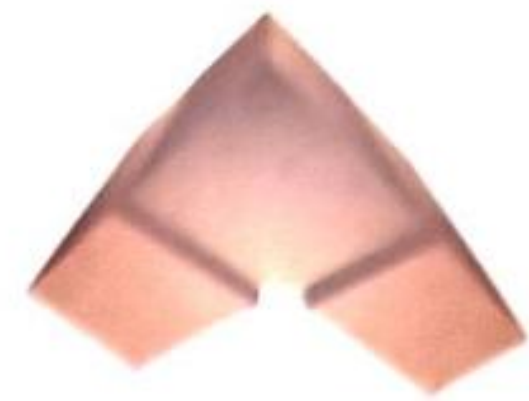
Satisfactory / Not Satisfactory

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GRADATION FOR BC
(As per MORT&H 500-18, Grading-2)

Name of Work	:	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatarayanapura Sub Division
Client	:	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant	:	M/s Tejus Consultants
Contractor	:	Sri. Santhosh Kumar K R
Date of Testing	:	16-07-2020
Type of Mix	:	BC
Sample I/D	:	BC3

Sample Location:	At plant	Date of Sampling:	15-07-2020
Type of material & Purpose:	BC	Date of testing:	16-07-2020
		Oven Dry Wt.(gms):	1200.0

IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	118	118.0	9.83	90.17	79 - 100
9.50	134	252.0	21.00	79.00	71 - 95
4.75	224	476.0	39.67	60.33	53 - 71
2.360	146	622.0	51.83	48.17	42 - 58
1.180	134	756.0	63.00	37.00	34 - 48
0.600	106	862.0	71.83	28.17	26 - 38
0.300	98	960.0	80.00	20.00	18 - 28
0.150	64	1024.0	85.33	14.67	12 - 20
0.075	82	1106.0	92.17	7.83	4 - 10
Pan	94.0				
Total	1200.0				

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BITUMEN CONTENT AND GRADATION DETERMINATION OF BITUMINOUS CONCRETE MIX

Name of Work :	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatara Sub Division
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	Sri. Santhosh Kumar K R
Date of Testing :	16-07-2020
Type of Mix :	BC
Sample I/D :	BC1

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DETERMINATION OF BITUMEN CONTENT

Description	Trail 1	Trail 2
1. Weight of Mixture before extraction, g	851	844
2. Weight of Mixture after extraction, g	803	798
3. Weight of Bitumen	48	46
4. Weight of filter paper before extraction, g	2.00	2.00
5. Weight of filter paper after extraction, g	4.04	4.00
6. Weight of fines, g	1.40	1.70
7. Weight of Bitumen & fines	49.40	47.70
8. Bitumen content in %	5.80	5.65
9. Average Bitumen content in %	5.73	
10. Minimum Bitumen content in %	5.80	

GRADATION FOR BC AFTER EXTRACTION

(As per MORT&H 500-18, Grading-2)

Sample Location:	At site		Date of Sampling:	16-07-2020	
Type of material & Purpose:	BC		Date of testing:	16-07-2020	
			Oven Dry Wt.(gms):	803.0	
IS Sieve size in mm	Weight retained	Cummulative weight retained (gm)	Cummulative % of retained	Cummulative % of passing	Specification limits
19.00	0	0	0.00	100.00	100.00
13.20	96	96.0	11.96	88.04	79 - 100
9.50	108	204.0	25.40	74.60	71 - 95
4.75	120	324.0	40.35	59.65	53 - 71
2.360	122	446.0	55.54	44.46	42 - 58
1.180	68	514.0	64.01	35.99	34 - 48
0.600	62	576.0	71.73	28.27	26 - 38
0.300	72	648.0	80.70	19.30	18 - 28
0.150	52	700.0	87.17	12.83	12 - 20
0.075	44	744.0	92.65	7.35	4 - 10
Pan	59.0				
Total	803.0				

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DETERMINATION OF RATE OF SPREAD TACK COAT



Name of Work :	Improvements RCC Road and Drain in surrounding area in Ward No.5 Byatarayanapura Sub Division
Client :	BRUHAT BANGALORE MAHANAGARA PALIKE
Consultant :	M/s Tejus Consultants
Contractor :	Sri. Santhosh Kumar K R
Date of Testing :	16-07-2020
Type of Mix :	Tack coat
Sample I/D :	1

Determination	Unit	Test No		
		1	2	3
Size of Plate (mxm)	Mt	0.30 x .30	0.30 x .30	0.30 x .30
Area of Plate (a)	Sq.mtr	0.09	0.09	0.09
Initial Wt of empty Plate (b)	Kg	0.788	0.792	0.768
Final weight of plate after application of tack Coat (c)	Kg	0.811	0.815	0.791
Weight of tack Coat (d=c-b)	Kg	0.023	0.023	0.023
Rate of spread of tack coat	Kg/sq.m	0.252	0.254	0.250
Average	Kg/sq.m	0.252		
Specified Limit	Kg/sq.m	0.250 Kg/sq.m		

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